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ABSTRACT

Suicide attempts and suicidal ideation among adolescents have been increasing faster than those for adults. This study addresses three questions on adolescent suicidal behavior: (1) Why do some adolescents with psychiatric disorders have a history of suicidal behaviors and some do not?; (2) How do intrapsychic and interpersonal underpinnings of adolescent suicidal behavior differ from patterns of similar behavior among children and adults?; and (3) How do pathways of adolescent suicidal behavior differ for boys and for girls? It was hypothesized that differences in expression of pathology between males and females might underlie the relationship between gender, self-esteem, social support from family, and suicidal behavior. Psychopathology was classified according to whether a dysfunctional behavior originated from inner turmoil ("internalizing"), or from outer turmoil (focusing on others' role in creating pain--"externalizing"). After examining 171 boys' and girls' suicidal behaviors versus adolescents with no history of such behavior, statistical analysis revealed the influence of gender but no significant gender-by-group interaction. Findings indicate that a low level of perceived family support was the only significant predictor of history of suicide attempts for girls. Boys' suicide attempts were predicted by perceived family support and by higher levels of externalizing behavior and internalizing behavior, and by greater age, when compared to girls. Four tables present statistical analysis. Contains 12 references. (RJM)

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ED 395 228

Pathways of Adolescent Suicidal Behavior

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Background. The rate of suicide attempt and suicidal ideation among adolescents has been steadily increasing at a rate greater than that for adults (Centers for Disease Control, 1985; National Center for Health Statistics, U.S. Department of Health and Human Services, 1988; Garland & Zigler, 1993). Despite these findings, relatively little empirical attention has been given to better understanding the personal and interpersonal characteristics specifically associated with adolescent suicidal behavior. The purpose of the present study was threefold. First, it was designed to address the question "Why do some adolescents with psychiatric disorders have a history of suicidal behaviors and some do not?" Second, the study explored how the intrapsychic and interpersonal underpinnings of adolescent suicidal behavior might differ from patterns of suicidal behavior among children and adults. Third, the study considered how such pathways of adolescent suicidal behavior might be different for boys and for girls.

Hypothesis. We hypothesized that differences in expression of psychopathology between males and females might underlie the relationship we had found between gender, self-esteem, social support from family, and suicidal behavior (Munzer, 1993). Expression of psychopathology was classified according to a common theoretical model which holds that dysfunctional behavior is a manifestation of inner turmoil; the manner in which individuals express this turmoil determines their style of psychopathology. Individuals who turn their turmoil inward, focusing on themselves as the cause of their

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pain and minimizing its direct expression to those around them are "Internalizing." Individuals who turn their turmoil outward, focusing on the role of others in its cause and taking these feelings out on others are "Externalizing."

Methods. Participants were 171 adolescents (95 males and 76 females), recruited upon admission to psychiatric treatment. The mean age is 14.9 years (s.d.=1.6), with no significant difference between males and females ($t(169)=.65$, $p=.513$). The sample is predominantly white (84.5%). The study was designed as a case/comparison study of adolescents with a history of suicidal behaviors versus adolescents with no history of suicidal behaviors. History of suicidal behaviors was determined by semi-structured interview (Linehan & Nielsen, 1981). Among the male participants, 39 (41%) had a history of suicidal behaviors; 45 (59%) of the female participants had a history of suicidal behaviors.

The protocol was a single point-in-time design, with all instruments administered as individual interviews. Levels of internalizing and externalizing behavior were measured using items from the Youth Self-Report (Achenbach & Edelbrock, 1987), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the Beck Hopelessness Scale (Beck, Weissman, Lester & Trexler, 1974.) and the Demographic and Descriptive Interview (Chiles, Miller & Cox, 1980.). These revised measures of internalizing and externalizing behavior were developed to reflect the specific theoretical model of psychopathology stated above (Table 1). A measure of perceived family support (Procidano, Heller & Swindle, 1980) was also included. Multivariate analysis of variance (MANOVA) with two factors (sex and suicidal behaviors) was used to determine multivariate significance and variables to include in the model. Best-fit models differentiating adolescents with a history of suicidal behaviors were determined using logistic regression analyses.

Results. MANOVA with perceived social support, internalizing behaviors scale, externalizing behaviors scale and age revealed a significant effect for gender [$F(4,122)=6.28$, $p<.001$] and for group [$F(4, 122)=12.14$, $p<.001$] but no signfiicant gender-by-group interaction. Table 2 summarizes the post-hoc univariate analyses. Based on logistic regression analysis of various possible models, the study revealed two distinct pathways of adolescent suicidal behavior which seem to be a reflection of gender differences rather than differences in style of psychopathology, as initially hypothesized (Table 3). A low level of perceived family support was the only significant predictor of history of suicide attempt for girls. For boys, lower perceived family support joined higher levels of externalizing behavior, higher levels

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of internalizing behavior, and greater age as predictors of history of suicide attempt.

Conclusions. The findings of this study offer only a glimpse into the complex dynamic of family relationships and personality among adolescents. Future exploration of the specific directional pathways of cause and effect among the variables of suicidal behavior, family support, and degree and style of psychopathology would increase the clinician's ability to design and implement more successful interventions with troubled youth. The findings of this study clearly indicate, however, that any such exploration must consider different pathways of suicidal behavior for adolescent girls and boys. The study suggests that girls at this developmental stage may think about, evaluate, and internalize family interactions more than their male counterparts. The study also has strong implications for suicide risk screening. While statistical findings can not lead us to direct predictions of risk in individuals, the assessment of perceived family support is strongly indicated in screening for suicide risk among all psychologically troubled adolescents, but is especially salient in screening for risk among girls. Researchers and clinicians must address the influential role that social interactions, and more importantly, family relationships, play in the psychological development of adolescents of both genders.

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Table 1:

Items in Scales Created to Measure Internalizing and Externalizing Behavior

SCALE	ITEM	SOURCE
Externalizing Behaviors ($\alpha = .76$)		
	I threaten to hurt people.	YSR[a]
	I physically attack people.	YSR
	I show off or clown.	YSR
	I destroy things belonging to others.	YSR
	I get in many fights.	YSR
	I steal things from places other than home.	YSR
	I have been expelled or suspended from school.	DADI[b]
	I ease others a lot.	YSR
	I run away from home.	YSR
	I am mean to others.	YSR
	I swear or use dirty language.	YSR
	I steal things at home.	YSR
	I cut classes or skip school.	YSR

Table 1 (continued):

Items in Scales Created to Measure Internalizing and Externalizing Behavior

SCALE	ITEM	SOURCE
Internalizing Behaviors (α = .74)		
	I feel that I have to be perfect.	YSR
	I feel too guilty.	YSR
	I am unhappy, sad, or depressed.	YSR
	I am nervous or tense.	YSR
	I feel lonely.	YSR
	I have trouble sleeping.	YSR
	I don't have much energy.	YSR
	I feel that no one loves me.	YSR
	I can't get my mind off certain thoughts.	YSR
	I take a positive attitude toward myself. (reverse scored)	SES[c]
	On the whole, I am satisfied with myself. (reverse scored)	SES
	My future seems dark to me.	HS[d]
	Things just won't work out the way I want them to.	HS

[a]Achenbach Youth Self Report; [b]Demographic & Descriptive Interview; [c]Rosenberg Self-Esteem Scale; [d]Beck Hopelessness Scale

Table 2

Means and Univariate Statistics of Model Variables

for Study Groups, by Gender

	MALES		FEMALES		
	HSB[1] (n=39)	NoHSB[2] (n=56)	HSB[1] (n=45)	NoHSB[2] (n=31)	Univariate F for group effect (1,122)
Variable	Mean	Mean	Mean	Mean	
Perceived family support	9.24	10.61	9.50	10.71	12.478*
Internalizing Behaviors Scale	11.66	9.02	14.60	11.00	17.84*
Externalizing Behaviors Scale	13.90	7.66	10.15	7.46	19.92*
Age	15.55	14.50	15.18	14.50	8.83

*$p < .01$ (with Bonferroni's correction on post-hoc analyses)

Table 3

Best Fit Models, Based on Logistic Regression Analyses,

for Predicting History of Suicidal Behaviors

In a Sample of Adolescents in Psychiatric Treatment

Sample	Terms in Model	Accuracy	Specificity	Sensitivity
Males & Females		76%	79%	73%
	Gender; Age			
	Externalizing Behaviors;			
	Perceived Support from Family			
Males Only		81%	83%	72%
	Age;			
	Externalizing Behaviors;			
	Internalizing Behaviors;			
	Perceived Support from Family			
Females Only		70%	60%	76%
	Perceived Support from Family			

Table 4

Relative Risk Estimates For Significant Parameters of Logistic Model

Sample	Parameter	Relative Risk	95% Confidence Interval Bounds for Relative Risk	
			Lower	Upper
Males & Females				
	Female	1.62	1.01	2.59
	Older Age	1.46	1.11	3.03
	Higher Externalizing Behaviors	1.17	1.06	1.30
	Lower Perceived Support from Family	1.38	1.11	1.71
Males Only				
	Older Age	1.43	1.00	2.08
	Higher Externalizing Behaviors	1.20	1.06	1.35
	Higher Internalizing Behaviors	1.14	0.96	1.36
	Lower Perceived Support from Family	1.46	1.07	2.00
Females Only				
	Lower Perceived Support from Family	1.41	1.03	1.92